AN ADDRESS

ON

TWENTY-FIVE YEARS OF CLINICAL WORK.

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M.D., B.Sc., F.R.C.P. LOND.,

Senior Physician to the Bristol Royal Infirmary, and Professor of Medicine in University College, Bristol.

A Presidential Address

TO THE BATH AND BRISTOL BRANCH,

READ AT THE ANNUAL MEETING OF THE BRANCH ON JUNE 28TH, 1893.

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GENTLEMEN,—In accepting the honourable position to which I have been called by the generosity of the members of our local Branch of the British Medical Association, I have at the outset to perform what is the most difficult of the duties of your President, that of inflicting upon you an address which should be worthy of yourselves and the occasion. In pondering over a subject for this address, I concluded that, inasmuch as you have thought me worthy to occupy this position, it would not be a serious wound to one's modesty if my discourse should assume a somewhat personal character, by containing an outline of certain reflections relating to my own medical history extending now to over twenty-five years. This period, a quarter of a century, is a short one if we contemplate it from the geologic standpoint; but it is no small portion of the historic period of medical life on the globe, and is a very large fraction of the life of even the most robust individual. Hippocrates is said to be a little ancient and out of date, but it may be of interest to note that it

is not so long as we sometimes imagine since his precepts (370 B.C.) were first spoken; an ancient plane-tree is still pointed out at Cos beneath which Hippocrates is said to have held his consultations. Our own short histories form no mean portion of the medical life of the globe, when we remember that a quarter of a century is $\frac{1}{98}$th part of the whole period since the time of Hippocrates; or, to go further back still, $\frac{1}{120}$th part since the time of Æsculapius (1250 B.C.). Probably no one of the 98 periods to which I have referred has shown more real progress than that in which it has been our privilege to live. We often talk glibly about the wisdom of our ancestors, but certainly in matters medical we have a solid foundation and can safely place ourselves on the summit. We are the inheritors of the world's wisdom, and must fail in our trust if we do not profit by the failures or successes of the leaders in the past, and transmit their results improved to our successors, leaving the world somewhat better than we found it.

The lapse of twenty-five years gives time for the rashness and impetuosity of youth to tone down into the mature judgment of middle life. It allows ample time for the scepticism arising from want of knowledge to be overcome by the experience of medical work; and yet it is not long enough for the development of tissue changes associated with the condition so graphically described by Dr. Osler. My colleagues who have passed the age of 60 will pardon me for quoting his remarks:[1]

"Insensibly in the fifth and sixth decades there begins to creep over most of us a change, noted physically among other ways in the silvering of the hair and that lessening of elasticity, which impels a man to open rather than to vault a five-barred gate. It comes to all sooner or later—to some only too painfully evident; to others unconsciously, with no pace perceived. And with most of us this physical change has its mental equivalent, not necessarily accompanied by loss of the powers of application or of judgment—on the contrary, often the mind grows clearer and the memory more retentive; but the change is

[1] *Teacher and Student.* Murphy & Co., Baltimore. 1890.

seen in a weakened receptivity and an inability to adapt oneself to an altered intellectual environment. It is this loss of mental elasticity which makes men over forty so slow to receive new truths. Harvey complained in his day that few men above this critical age seemed able to accept the doctrine of the circulation of the blood; and in our own time it is interesting to note how the theory of the bacterial origin of certain diseases has had, as other truths, to grow to acceptance with the generation in which it was announced.

> 'Let me not live
> After my flame lacks oil, to be the snuff
> Of younger spirits whose apprehensive senses
> All but new things disdain.'"

The period at which one is likely to occupy your presidential chair is one at which a kind of stock-taking on the past, and some definite conclusions which may serve as the foundation for resolutions for the future, may well be taken with benefit to oneself before the condition described by Osler has arrived; and I hope it may not be devoid of interest to those whom I have the privilege to address.

The variations in views resulting from the slow evolution of the medical mind tend to pursue a more or less uniform course at different ages: the early student, just emerging from the second of Shakspere's "Seven Ages," has great expectations and unbounded faith. It is related of the veteran Ruskin that, when love-sick and pseudo-consumptive, travelling among his beloved mountains, the air of the Alps and the spirit of mountain-worship having brought him to himself again, one day in church at Geneva, he resolved to *do* something, to *be* something useful.[1] We know how he kept his resolve, and we know how most of us have failed in ours; for we have all of us taken these resolves, and it is not altogether profitless to be now and then reminded of them.

Our youthful expectations are rarely realised, and faith is apt to be limited to a profound belief in the *vis medicatrix naturæ*.

[1] Collingwood's *Life*, vol. I., p. 94.

As maturity advances and medical knowledge becomes slowly assimilated, we commonly observe that faith grows; and the mature practitioner, having learnt the narrow limits of the *vis medicatrix*, always has faith in himself and his methods more than in Nature, this faith being well grounded on a steadily-increasing experience and growing by what it feeds on. In the absence of such faith as this, one may well question the judgment or the sobriety of any medical man of mature age who makes light of his powers, and who ventures to point the finger of scorn at one who professes faith in physic.

My own medical history has been somewhat of this kind. My student's course came at a time when a rebound against active medication and alcoholic stimulation was a predominating feature; the views of Todd were still paramount in Todd's Hospital, but not elsewhere; and those of Sir William Gull on mint-water were highly attractive to the student's mind. Accordingly, during my clinical-clerking and house-physician days the great majority of our patients were allowed to demonstrate the natural history of disease under the influence of some innocent placebo known as mist. flava, mist. nigra, mist. cærulea, and so on: thus one would in time get to have a very clear idea of what Nature could accomplish without the aid of active medication. Coincidently with this tendency to inactivity in treatment was a disposition to disregard or even to disbelieve in anything which was not clearly due to gross organic lesions; functional disorders of all kinds were quite beneath notice, and the liver as a cause of anything besides jaundice and ascites was only worthy of contempt. It must of necessity be the case that the early student should realise and understand the meaning of coarse and visible organic defects before he can appreciate all the various disturbances of the whole machinery or its parts not accompanied by visible local lesions. The multitudinous forms of functional disturbance, perhaps too complex or too trivial to receive a name, are correspondingly difficult to detect; but nevertheless these are the things which the student is afterwards called upon to treat, and which he only becomes

familiar with by the slow and tiresome process of accumulating experience from cases. The student of to-day has many advantages over his predecessors, and I have often contemplated with admiration the results of some of our Medical School examinations by reflecting on how little of all this we ourselves knew at a time when we were able to cope successfully with the examinations then provided. Nevertheless the way is still the same, and a good acquaintance with the art of medicine must be of slow growth. Hence it is not to be wondered at that we still from time to time hear of groans over the worthlessness of drugs, and on the importance of the personality of the practitioner rather than the value of the drugs he employs.

Dr. Samuel Wilks has recently given us a good essay on this topic in the *Practitioner* for January, where he quotes many instances of the direct and positive cure of various diseases whose usual tendency is towards an inevitable end in the death of the patient. He mentions more especially that interesting malady exophthalmic goitre, idiopathic anæmia, tubercular peritonitis, and chronic diarrhœa, as well-marked diseases which are arrested and cured by the medical art. Each one of us might readily supply from his own experience many additions to this list. Who has not often been astonished at the way in which conditions which appear to be organic and incurable become relieved by suitable treatment administered with sufficient activity? Who will venture to limit the possibilities of improvement in cases of failing heart? If we can only guide the patient through the temporary difficulty, how often is the balance restored and the patient recovered almost from the grave! It is only by watching cases of this kind from year to year that one gets to realise how much more important the functional often is than the organic, and how completely organic defects may be compensated for. The mere presence or absence of a bruit is the point which strikes the student, and this is not unfrequently promoted to the front rank as if it were the disease itself. It is only by prolonged experience that the practitioner gets to realise the evidences of failing heart with

no signs of valvular leak, or that bruits of one kind or another, and even of considerable intensity, may be of no importance whatever in any given case.

One of the most interesting of the changes in medical opinion and practice we have seen during recent years has been the more hopeful tone in prognosis, and the more successful results of our efforts in the treatment of phthisis. As an illustration of what may be done, I need only refer to the case of the late Mr. John Addington Symonds, who, having successfully kept the disease in abeyance for nearly twenty years, died a few weeks ago in Rome from an attack of acute pneumonia. It is frequently said, and re-said, that recent researches in the etiology of phthisis have not advanced the treatment of the disease or done anything for the patient, but is it so? Is it not a daily occurrence that we see cases of advanced tubercular disease improving steadily under one or another of the various kinds of treatment in vogue, and then not unfrequently living to die of some other intercurrent or independent disease? Even if no definite or specific antidote can yet be relied upon, surely much can be done to improve nutrition, and render the soil less susceptible to the inroads of bacterial agents. May we not also hope to really arrest or retard the life, activity, development, and growth of the bacilli, as well as to neutralise the action of the poisons produced by them? Much has been done already; much remains to be done, but surely we may claim to have improved on the now ancient method of contenting ourselves with a diagnosis and the administration of cod-liver oil. I observe that Dr. Spengler, of Davos, in some recent statistics, reports a permanent cure of as many as 42.8 per cent.

In the field of Neurology what advances have been made! It was only in my student days that the characteristics of tabes dorsalis were beginning to be recognised as something different from ordinary paraplegia due to myelitis or tumour; and how often have those of us who have attained middle age been perplexed to account for the results which the junior members

of the profession at once recognise as due to multiple peripheral neuritis!

The treatment of rheumatism has been entirely revolutionised during the period to which I allude. In my student days rheumatic fever was a very protracted malady, requiring careful watching day by day, and generally leaving the heart more or less seriously damaged. Now it is a very simple affair. After a few hours of active dosing all the symptoms are relieved, and the patient is practically convalescent. Almost as a matter of routine the resident medical officers deal with these cases, and no interference on the part of the physician is needed. It is always a little astonishing to me why some of those patients who are admitted to hospital after two or three weeks' illness should have been allowed to go on so long without the benefit of the needful salicylates, which usually within a few hours give the long-looked-for relief.

Have we not also made a great advance during recent years in the feeding of our patients? The introduction of peptonising agents is of incalculable value in cases of gastric ulcer, and where the digestive powers are failing from acute disease of all kinds. What a reformation has the principle of gastric rest brought about in the results of gastric hemorrhage and ulceration! And the numerous foods prepared by active and enterprising pharmacists materially aid us in suspending the work of digestion for the sake of physiological rest to the damaged organs.

The utility of, and necessity for, pre-peptonisation of foods in cases where rectal feeding is necessary needs only a passing mention.

But the topic to which I wish to direct especial attention to-day is the use of antipyretics and internal antiseptics, more particularly in typhoid fever. During the last twenty-five years the treatment of enteric has been slowly undergoing a process of evolution involving many and great changes. The statistics showing the high mortality under what was called "the expectant plan" have been often quoted, and have recently been collected

by Dr. Gilman Thompson, of New York.[1] They show a death-rate ranging from 17 or 18 up to 49 per cent., and in New York city from 1876 to 1885 a series of 7,712 cases had a mortality of 41.28 per cent. On the other hand, it is now a matter of ancient medical history that Brand and his followers claim to have reduced that mortality to 3.9 per cent. in a series of 5,573 cases, by means of thorough antipyretic treatment.

At the Bristol Royal Infirmary we commenced a more or less systematic treatment by antipyretic methods in 1878, and the statistics from that time are as follows:

1878 to 1883.—195 cases; number of deaths, 19. Three fatal cases, found to be due to other causes, reduce the mortality to 16; giving a percentage of 8.2.

The number of recoveries was		176
Of these, no special treatment in		119
Quinine only		15
Baths only		14
Various combinations — quinine, salicylates, resorcin, kairin, digitalis		28

More recently the results have been collected for me by Mr. Ormerod, showing a mortality of 15.38 per cent. in a series of 221 cases, extending over nine years.

This table gives us an excellent illustration of the fallacies associated with any inferences drawn from a small number of cases. In the year 1885 there were 14 cases, with no death; in 1889 there were only two deaths in 39 cases; whereas in the last year, 1892, the mortality of a small number of cases—27—has been as high as 27.27 per cent.

The total number of cases since the year 1878 amounts to 413, with a mortality of 50; giving a percentage of 12.10.

This result has been obtained by partial antipyretic treatment of one kind or another, but is not worthy of comparison with the one per cent. in a series of 1,223 collected from the

[1] *Inter. Clinics*, vol. iv.

[2] Graham Steell, *Med. Chron*, April, 1892.

experience of Brand, Vogel, Jürgensen, and others, or with the 40 cases with no death reported by Wilson of Philadelphia.

It was soon after my appointment as physician that we commenced a more or less systematic application of the principles of antipyretic treatment laid down by Brand and advocated by Liebermeister. We quite adopted the dictum given by Murchison, that "there is no specific for enteric fever," and the further remark that "it must not be thought that the best treatment is one of mere expectancy." It has recently been said by Peabody[1] that it would be difficult to devise a more irrational method than what has been called the expectant one; there may be uncertainty as to what will prove to be the best method, but this scarcely justifies the plan which has been too long in vogue of wrapping ourselves round with the cloak of "masterly inactivity" whilst we study the natural history of a disease which is well known to have a mortality of something over 20 per cent., and which, by masterly activity, has been and can be reduced to one-fourth this amount. We are only now beginning to arouse ourselves out of this lethargic apathy, which has for so long almost prevented progress in the treatment of this grave disorder. The learning of a new truth is always a remarkably slow process, especially if we have to give up an old belief before we can adopt the new. The words of Paracelsus[2] seem to describe the way in which a new truth may or may not receive acceptance. He says:

"Truth is within ourselves; it takes no rise
From outward things, whatever you may believe.
There is an inmost centre in us all,
Where Truth abides in fulness; and around,
Wall upon wall, the gross flesh hems it in,
This perfect, clear perception—which is Truth.
A baffling and perverting carnal mesh
Binds it, and makes all error: and to *know*
Rather consists in opening out a way
Whence the imprisoned splendour may escape,
Than in effecting entry for a light
Supposed to be without."

[1] *Med. Analectic*, Jan., 1890. [2] Browning, p. 34.

It is difficult to understand why it was that the results of antipyretic treatment obtained so little credence for many years, and even now are only treated with suspicion and half-belief. The cold-bath method, in one or other of its numerous modifications, has in most hospitals been long ago superseded by one or other of the numerous medicinal antipyretics. But there appears just now to be rather a reaction in its favour, and Dr. J. C. Wilson recently[1] claims to have reduced the mortality 50 per cent. by this method at the German Hospital in New York. The "baffling and perverting carnal mesh" has long enveloped the antipyretic treatment of typhoid; the inconveniences of systematic bathing, the discomfort of it and the trouble of it, have been allowed to overwhelm the statistics of its results, and have led to the employment of one after another of the numerous substitutes which have from time to time been in vogue. All are agreed as to the efficacy of the cold bath, not only in reducing the temperature, but in reducing the severity of the general symptoms; those who have used the bath largely have every confidence in its efficacy, and where time is an object it still remains the only reliable method for the graver forms of hyper-pyrexia. Quinine in large doses has also been abundantly proved to be a reliable antipyretic when used in a particular way, but there is still much misconception on this point: even the best of text-books give inaccurate statements, and it cannot be too definitely stated that five or ten grains of quinine, even when given every three or four hours, is not an antipyretic dose—which should be, for an adult, not less than thirty or forty grains within one hour. The cold bath, and quinine, formerly gave us excellent results, and we rarely failed to keep down the temperature below the 103° line without any other medicinal means.

But the systematic use of the cold bath was gladly given up in favour of the long list of modern antipyretic drugs of the aromatic series, of which one after another has come into use for a time, but only to be supplanted in the course of a year or

[1] *Medical News*, March 26, 1892.

two by something better. Most of these drugs have done good service, but one after another has fallen into disrepute, and even the favourite antipyrin has now been to a very large extent superseded by the more modern favourite phenacetin, around which the antipyretic treatment of typhoid now for a while appears to rest; and we may well compare and contrast phenacetin and the cold bath as the two rival methods struggling for mastery. On the one hand, we have the cold bath, having neither the depressing action of modern antithermics upon the heart nor their irritating action upon the kidneys; a perfect antipyretic, but with many serious disadvantages: on the other hand, we have a coal-tar product, which gives no dangerous depression such as follows some of the members of the aromatic group, which acts rapidly as an antipyretic, and at the same time is a nerve sedative and produces little effect on the circulation. This drug, in doses of three to eight grains—five grains usually suffice in the adult,—gives a marked fall of temperature in about thirty minutes after ingestion, and the reduction continues usually from four to six hours. If larger doses be given, profuse perspiration may occur, but no bad consequences supervene; and I quite endorse the statement of Goldmann[1] and of Shoemaker[2] that it is "the safest and most efficient member of the aniline group."

Dr. Ott[3] states that in the first week of typhoid fever phenacetin repeated for several days causes the greatest relief to the severe pain in the head; it quiets the restlessness and promotes sleep; and that phenacetin is less dangerous than the other antipyretics. In rapidity of action, antipyrin, on account of its solubility, comes first, next antifebrin, and last phenacetin. The fall of temperature by phenacetin is more gradual, and the minimum is not reached for three, four, or even five hours after the administration of the drug. As regards duration of action, that of phenacetin is longer than that of antipyrin or antifebrin.

[1] *Med. Bulletin*, June, 1890.
[2] *Materia Med., Pharm., and Therapeutics*, vol. ii.
[3] *Modern Antipyretics*, Easton, Pa.

Neither has phenacetin so great a destructive influence upon hæmoglobin, like kairin, thallin, or pyrodin, nor is it so apt to cyanose, like acetanilide. The drug appears to exert its action more by lessening production of heat than by increasing discharge; and here we have an important difference between it and the cold bath. "Phenacetine decreases heat production, the bath increases it; the one permits the source of thermogenesis to go on actively, the other represses it; the one fans the flame, the other smothers it."[1] Need we any longer hesitate which of these two agents should have the preference? Why should we give the patient the discomforts of the bath, when heat production can be lessened by other means, not only with comfort, but with absolute safety?

It may be said that no antithermic agent is able to abridge the definite cycle of life of the fever organisms or shorten the duration of typhoid for a day, but it may nevertheless save tissue degeneration, and enable the patient to weather the storm. Further, it has been demonstrated by Carl Beck,[2] that the *antiseptic value* of acetanilide, phenacetine, and phenocoll, all descendants of a typical antiseptic, possess a well-marked germicidal power, as shown by their action on wounds and ulcers. Phenacetine is more powerful than acetanilide, and is intermediate between boric acid and iodol. Phenocoll far surpasses both; is equal to iodoform, and stronger than aristol, dermatol, iodol, pyoctanin, europhon, &c.

In our own experience at the Bristol Royal Infirmary and elsewhere, phenacetine has almost entirely superseded all other antipyretics. Its advantages were seen to be so decided, and its effect altogether so satisfactory, that for several years past this has been almost the only drug in everyday use for the reduction of fever heat. We rarely find that it fails to do what is expected of it, and we have no hesitation in repeating the dose hour after hour until the looked-for effect comes. Although at one time I was an ardent advocate of cold-bath treatment, it

[1] Ott.

[2] *N. Y. Med. Journ.*, April 22, 1893.

is now several years since I have had occasion to use it; and although I still have the greatest confidence in the antipyretic value of full doses of quinine, it is several years since I have found it necessary to fall back upon it.

Before leaving the subject of antipyretics in fever, I would like to add one word of caution. There seems to be a tendency to become discontented after a while with any method of treatment, no matter how good it may be; and the modern antipyretics are becoming a little discredited, prejudice against them appearing to be growing. The natural outcome of such prejudice will be to leave the fever alone altogether, and so recur to our former expectant method. This, to my mind, will be a gigantic error. We must not allow the swing of the pendulum to go as far as this. Failing the modern method, we must of necessity fall back on the older antipyretics—quinine, digitalis, cold bath, and so on; but antipyretic treatment, in one form or another, has become as great a necessity to the physician as antiseptics have to the surgeon.

It is a fortunate circumstance too that the antipyretics are to some extent antiseptic drugs; and apart from the antipyretic action altogether, the modern use of antiseptic drugs to counteract the effect of germs and their toxines is a method of treatment of which we are likely to learn more in the future than as yet we can conceive.

The internal administration of antiseptics has been increasingly in vogue for some years past, but the problems associated therewith are by no means so simple as are those of antiseptic surgery, and hence the results are not as yet worthy of comparison with what has been achieved in the surgical field. The use of some antiseptic drug for the purpose of disinfecting the alimentary canal has been abundantly justified since the discovery of the bacillus as the primary agent in typhoid fever, and still more since the production of secondary toxines and general diffusion of these has been demonstrated: a third factor, to be differentiated from both the others, the presence and action of pus-producing organisms, acting locally at first, but

capable of diffusion by lymphatics, may also be counteracted by intestinal antiseptics.[1]

It has been pointed out by Dr. Boyd [2] that typhoid fever is primarily an intestinal catarrh, with secondary septic poisoning; that the entire process of primary gland invasion by the specific bacillus is probably over in fourteen days, and that there then follow a new set of enemies, the suppurative micrococci. He believes that antiseptics will at least prevent the septic results due to these latter, although they may not abort the typhoid proper. He advises a gaseous antiseptic as the best, and he prefers chlorine in alkaline solution, which he finds will bring the febrile process to an end on the fourteenth or sixteenth day in one-fourth of the cases; whereas Murchison found that only seven in two hundred cases terminated on the fourteenth day.

Of all the numerous methods which have been suggested for the production of intestinal antisepsis, probably calomel may prove to be one of the best. It has a lengthened history, and is now again revived and adopted by Dr. Latham,[3] who states that five grain doses during the first week will be likely to retard decomposition due to low organisms, and give such results as have been recorded by Liebermeister,[4] who believes that it materially shortens the duration and lessens the intensity of the disease when given in doses of eight or ten grains three or four times in the first twenty-four hours, before the ninth day of the fever. This method was advocated long ago by Murchison, Niemeyer, John Harley, and others; but, possibly under the influence of the long-abiding anti-mercurial craze, has not been received with a sympathetic consideration by the profession as a whole. We have here an excellent illustration of the statement made by Lecky, that no theory is ever given up because of its results; no matter what the results may be, theory and prejudice are apt to win in the contest. But now,

[1] *Med. Record*, February 25, 1893. Dr. Purdom.

[2] *Trans. R. Irish Acad.*, vol. x.

[3] *Lancet*, March 12, 1893.

[4] Von Ziemssen' *Cyclopædia of Practical Medicine.*

under the stimulating influence of another theory, the antiseptic calomel seems likely to gain favour and become a far more popular drug than in the palmiest days of active mercurial treatment. The ill effects of pent-up secretions, more particularly in cholera and typhoid fever, have long ago been insisted on by Sir George Johnson,[1] and we are beginning to recognise the fact that purgation may be an indispensable auxiliary to antisepsis as applied to the alimentary canal. Various recent authors have advocated calomel in moderate doses during the first week. Bonning[2] believed it to be an essential part of his ideal treatment for every case, mild or severe; and of the sixty cases reported, none died. Van Eman[3] includes calomel in five or ten grain doses as the first element of his specific treatment, the essential elements of which are sterilized foods and drinks with dilute hydrochloric acid in half-drachm doses every three hours; he believes that the long-continued popularity of the acid treatment is due to the fact that germs can only be cultivated in an alkaline medium. In illustration of the possible advantages of an acid antiseptic is the remarkable testimony given by Dr. Wilks, of Ashford,[4] whose results with sulphurous acid have received less attention than they appear to deserve, inasmuch as a record of 171 cases with no death in a severe epidemic of typhoid speaks very powerfully in favour of the treatment. The acid was given in doses of twenty minims every four hours, and continued for a week or ten days or more, "until the patient complains of tasting, smelling, and feeling like sulphur or lucifer matches." Dr. Wilks claims for sulphurous acid, "that it arrests the further development of the fever poison, and by continuing this arrest long enough exterminates the fever." Following somewhat similar lines, but preferring his own method, Dr. Burney Yeo[5]

[1] *Brit. Med. Journ.*, 1867, vol. i., p. 274.
[2] *Phys. and Surg.*, December, 1889.
[3] *Journ. Amer. Med. Assoc.*, September 27, 1890.
[4] *Brit. Med. Journ.*, 1870.
[5] *Treatment of Typhoid Fever*, 1892.

advocates an acid solution of chlorine, containing two or three grains of quinine for each dose, and he reports results therefrom as follows:

1. A modification and sustained depression of the febrile temperature.
2. An abbreviation of the average course of the fever.
3. A remarkable maintenance of the physical strength and intellectual clearness of the patient, so that there has been far less need of stimulants.
4. A greater power of assimilating food.
5. A remarkable cleaning of the tongue.
6. A deodorisation of the evacuations.
7. A more rapid and complete convalescence.

Many other intestinal antiseptics have been in use. Bouchard first proposed charcoal, then iodoform, then naphthalin, and finally naphthol of two varieties, the α naphthol being more soluble and less toxic, but more irritant, than the β naphthol, which is less soluble, more toxic, and less irritant. The latter preparation he believed to be one of the best agents for disinfection of the alimentary tract, and he found that in typhoid fever this drug mitigates the severity, reduces the mortality, the stools become deodorised, tympanites lessened, the tongue moistened, and grave delirium rare. These results were confirmed by Mitchell Bruce [1]; and Petresco, of Bucharest.[2]

Hydro-naphthol was preferred by Michell Clarke,[3] who claimed for it the following results:

1. Reduction in the average duration of the fever.
2. Stools become much less offensive.
3. A diminution of abdominal tenderness and meteorism.
4. Early cleaning of the tongue, and less dryness of the mouth and lips.
5. Absence of albuminuria.

[1] *Practitioner*, December, 1888.

[2] *Recherches Cliniques et Experimentales sur l'Antisepsie Médicale*, January, 1889.

[3] *Practitioner*, December, 1888, and July, 1890.

6. Convalescence more rapid, and strength less reduced.
7. Less risk of propagating the disease to others.
8. Tendency to secondary complications diminished.

More recently carbolic acid has become the favourite drug, and much evidence in its favour has been forthcoming. It has been given by itself, or in combination with iodine, or with salicylic acid as salol.

Gramshaw's results with the iodine combination[1] were remarkable, inasmuch as there was only 1 death in 116 cases; but Osler nevertheless testifies to the inefficacy of this treatment in modifying the course of the malady.

Much is now expected from the *salol* compound, the phenylic ether of salicylic acid, which is said by Cahall[2] to control the temperature, cause an amelioration of all the symptoms, and in 16 cases there were no deaths, the average duration being only seventeen days.

It has recently been preferred by Dujardin Beaumetz, who speaks of it as "the disinfectant *par excellence* of the intestines, that its toxic action is small, and that it is not wholly decomposed in the intestine."

Heiz extols this drug, giving it in doses of one drachm daily in combination with bismuth salicylate.[3]

Dr. A. M. Anderson, of Dundee, gives an account[4] of 12 cases treated with salol, and he asserts that the course of the disease is arrested on the fifth day of treatment; 10 of the patients were convalescent on the fifteenth day of the disease. From the condition of the stools and the permanent suppression of the typhoid symptoms on the fifth day, Dr. Anderson infers the complete destruction of all the specific typhoid poison in the patient's body; he believes that the excreta, before being expelled, are rendered perfectly harmless and incapable of propagating the disease. These results were obtained with doses of ten grains, given every two hours.

[1] *Lancet*, I., 1888, p. 1,243.
[2] *Med. News*, Nov. 8, 1890. [3] *Repertoire de Pharmacie*, July 10, 1890.
[4] *Med. Chron.*, March, 1893.

Dr. Barr[1] finds that salol lessens intestinal fermentation and irritation.

Carbolic acid in pills, as advised by Dr. M. Charteris,[2] gives results which are good. Each pill contains 2½ grs. of pure acid made up with some innocuous powder and covered with keratin. The pill accordingly does not dissolve in the stomach, and will not be likely to irritate or cause sickness. On solution of the pill in the alkaline fluid of the jejunum, the carbolic acid will at once begin to produce an antiseptic effect at the part where it is most likely to be needed and to be of greatest utility.

It remains to be yet proved what drug will give the best results as an internal antiseptic in typhoid fever, in phthisis, in pernicious anæmia, and other conditions where intestinal antisepsis is indicated. It has been pointed out by Dr. H. Elliott Bates[3] that in the prevention of self-infection from the intestinal tract, certain drugs have a selective action for particular parts of the alimentary canal; that for the gastric portion bismuth and charcoal are the best; but for the small intestine we should choose salol, sodic salicylate or benzoate, camphor, or ammonium benzoate; whilst for the large bowel we should prefer either β naphthol or charcoal. For the mouth it has been stated by M. Paul that nothing is better than saccharin.[4]

It is to be expected that any efficient antiseptic will at least serve to prevent the relapses which are so frequent in typhoid, and it is highly discouraging to find that nearly every one of the drugs in use fails in this respect, inasmuch as I have observed relapses (and sometimes more than one) after a steady perseverance in carbolic and iodine, after β naphthol, hydro-naphthol, and salol. Much evidence has already accumulated; but much more is needed, and can only be obtained by steady and painstaking perseverance by a multiplicity of observers in epidemics of varying degrees of intensity. We are all a little apt, and

[1] *Lancet*, May 13, 1893.
[2] *Brit. Med. Journ.*, December 31, 1892.
[3] *N. Y. Med. Journ.*, April 22, 1893.
[4] *Societé de Therapeutique—Mercredi Méd*, No. 2, 1893.

justly so, to be incredulous of the results reported by the man of one idea, and the personal equation must be eliminated before the results are likely to be generally accepted. Dr. Skerritt, in his address on "The Teachings of Failure,"[1] has inculcated a healthy scepticism with regard to the acceptance of crude hypothesis and untried methods; but, on the other hand, we must beware lest we become prejudiced against what is true because it is new, and so in avoiding the new we may miss the true.

As regards the modern antipyretic and antiseptic methods of treating typhoid as a whole, an interesting observation of Roqué and Weil[2] is worthy of consideration. They find that the elimination of toxic products in the urine, whilst incomplete during the height of the disease, is much increased during convalescence, when the toxic power of the urine becomes twice as great as in health, and is five or six times greater than that of health after a cold bath; the bath favours the elimination of injurious products. They find that after antipyrine the excretion of toxines may fall even below the normal, and therefore this drug is of no value so far as the elimination of toxines may go. This observation implies that the cold-bath treatment may after all be superior to other antipyretic methods, but as yet we are scarcely in a position to predict what may be done by active antiseptic and antipyretic methods in combination.

It is clear that we have not yet reached finality in this subject—the treatment of typhoid. One of the more thoughtful of my clinical clerks a few years ago expressed some surprise that we should not have a more established routine in such a well-known malady; but we have too long been the creatures of routine, and have too long contented ourselves to observe the fever process without endeavouring to check or to arrest it. It is high time we should carry the principles of antiseptic surgery into the treatment not only of typhoid fever, but of tuberculosis and other maladies. "Let us then be up and doing," says Longfellow, and "Learn to labour and to wait."

[1] *Bristol Med.-Chir. Journ.*, 1892. [2] *Revue de Méd.*, December, 1891.

I should like, before concluding, to allude to one other malady, in which we have as yet nothing but disastrous failure to report. Time prevents me from giving any details, but we all know how fatal a disease acute pneumonia is, and how little we seem to be able to do to arrest its progress or modify its course. Our statistics at the Bristol Royal Infirmary give an average death-rate of 23.71 per cent. for the last nine years, and this result appears to be much in accord with those of other hospitals. Here we have a subject for serious reflection and, if possible, radical reform in our methods of treatment. Pétresco, of Bucharest, has shown us a way to do better. After an experience of ten years he claims that large doses of digitalis will abort the pneumonia and curtail the attack by two or three days. After treating 1,061 cases in this way with a mortality of only 1 to 2 per cent., he says: "The marked success which I have obtained . . . imposes upon me the moral obligation of showing, by every means possible, the utility and power of this method."[1]

Other physicians also report favourably of the method. Dr. Bergen [2] states that digitalis, given to the full limit of tolerance—and it must be administered boldly,—will give a fall in temperature from 106° to the normal in twelve hours, with a mitigation of all the symptoms of the disease.

Dr. George Balfour gives a similar account of the results he has obtained by combining full doses of chloral with the digitalis, and states that a fall of temperature from 104° to 99° within a few hours of the commencement of this treatment may be expected in cases of uncomplicated pneumonia when treated from the first by these drugs.[3]

It may be said, and it is said, that such active treatment as that recommended is not justifiable; but surely if the mortality can be reduced from over 20 per cent. to 2 per cent., why should we hesitate? If the patient has to die from the disease, the drugs

[1] *Med. Chron.*, May, 1893.
[2] *N. Y. Med. Journ*, March 25, 1893.
[3] *Edin. Med. Journ.*, November, 1891.

will not hurt him; and the disease is far more potent for harm than the most active drugs, used under reasonable precautions.

Timidity accomplishes nothing; if we venture nothing, our results are certain to be poor. We have need to study, not so much the drug as how to use it; and the easy-going path of doing nothing active is not likely to lead to a satisfactory goal.

There seems to be nothing unreasonable in the idea that the processes going on in pneumonia should be under control, and I look forward to the time when the mortality of this disease will be reduced as much or more than has been the case with enteric fever.

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